Atty. Docket No. TUI-001CP



SEQUENCE LISTING

65

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RECEIVED JUN 2 8 2002 TECH CENTER 1600/2900

<120> BETA-CAP73 CONTROL OF NORMAL AND ABNORMAL CELL MIGRATION <130> TUI-001CP <140> US 09/750,590 <141> 2000-12-28 <150> 60/170.182 <151> 1999-12-10 <150> 09/733,818 <151> 2000-12-08 <160> 25 <170> FastSEQ for Windows Version 4.0 <210> 1 <211> 4730 <212> DNA <213> Bos taurus <220> <221> CDS <222> (392)...(4597) <400> 1 cagtgttgag gcggcaggat gtagagtgct gttcaagctt tccagtggag tccccgaaaa 60 gggaaggcag agaaagacat cttctaaata acaaatagga ggagttacag tacctgactt 120 ggggctgctc ttaatcaagt gctgccgctg caaggaagat aattttcaag cgttatgaag 180 gcggagaagg attccgaaga cgaagaaaat atccttagag atccaagcta agtgtagtgc 240 agcatgaaga ttgcagaaca ggaagagttc taagaagaag gactgagtca ctagttagga 300 gtotototga gggotggott tgtgagocac agtgatttgt aacttaatgo gaactaattt 360 gctgttagca acaagaaact aaatcctgtc t atg atg agc tgt tgg ttt tct Met Met Ser Cys Trp Phe Ser tgt gct cct aag aac aga caa gca gca gat tgg aac aaa tac gat gac Cys Ala Pro Lys Asn Arg Gln Ala Ala Asp Trp Asn Lys Tyr Asp Asp 15 cga ttg atg aga gca gca gaa agg gga gat gta gaa aaa gtg tcc tca Arg Leu Met Arg Ala Ala Glu Arg Gly Asp Val Glu Lys Val Ser Ser 25 atc ctt gct aaa aag gga gtc aat cca ggc aag cta gat gta gaa ggc Ile Leu Ala Lys Lys Gly Val Asn Pro Gly Lys Leu Asp Val Glu Gly 40

60

460 508 556 aga tot goo tit cat git gig goo toa aag gga aat oit gag igi itg 604 Arg Ser Ala Phe His Val Val Ala Ser Lys Gly Asn Leu Glu Cys Leu

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gta Val	gat Asp	Gly Gg	cgg Arg 155	aca Thr	cca Pro	ctt Leu	gtt Val	ctg Leu 160	gct Ala	acc Thr	cag Gln	atg Met	tgt Cys 165	agg Arg	cca Pro	892
aca Thr	ata Ile	tgt Cys 170	caa Gln	ctg Leu	ctg Leu	ata Ile	gat Asp 175	aga Arg	Gly ggg	gcg Ala	gat Asp	att Ile 180	aat Asn	tcc Ser	aga Arg	940
gac Asp	aaa Lys 185	caa Gln	aac Asn	agg Arg	act Thr	gct Ala 190	ctc Leu	atg Met	cta Leu	gga Gly	tgc Cys 195	gag Glu	tat Tyr	ggt Gly	tgc Cys	988
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cat His 280	Gln	aac Asn	att Ile	cag Gln	gat Asp 285	Leu	gag Glu	att Ile	gaa Glu	aat Asn 290	Glu	gat Asp	ctg Leu	aaa Lys	gag Glu 295	1276
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aat Asr	ggt Gly	tta Leu	cag Glr	cta Leu	cag Gln	cto Lev	g aat ı Asr	gag Glu	gaa Glu	gta Val	at <u>c</u> Met	gtg : Val	gct Ala	gat Asp	gat Asp	1372

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aag Lys	cag Gln 345	cat His	gaa Glu	gaa Glu	agc Ser	cta Leu 350	aga Arg	act Thr	att Ile	gag Glu	gct Ala 355	ctg Leu	aaa Lys	agt Ser	aga Arg	1468
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cag Gln	tgt Cys	act Thr	tcc Ser 395	aca Thr	ggc Gly	atg Met	cca Pro	gtc Val 400	cat His	atg Met	caa Gln	agc Ser	cga Arg 405	tct Ser	atg Met	1612
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tca Ser 440	Ala	aaa Lys	caa Gln	gac Asp	aga Arg 445	ctc Leu	aaa Lys	ctc Leu	caa Gln	aat Asn 450	Glu	ctg Leu	gct Ala	cac His	aag Lys 455	1756
gtg Val	gcg Ala	gag Glu	tgc Cys	aag Lys 460	gcc Ala	tta Leu	gca Ala	ttg Leu	gaa Glu 465	Cys	gaa Glu	agg Arg	gtg Val	aaa Lys 470	gag Glu	1804
gat Asp	tca Ser	gat Asp	gag Glu 475	Gln	ata Ile	aag Lys	caa Gln	cta Leu 480	GIU	gat Asp	gcc Ala	ttg Leu	aaa Lys 485	Asp	gtg Val	1852
cag Gln	aag Lys	aga Arc 490	Met	tat Tyr	gag Glu	tcg Ser	gaa Glu 495	Gly	aaa Lys	gtg Val	aaa Lys	caa Gln 500	Met	cag Gln	aca Thr	1900
cat His	ttt Phe	Lei	gcc Ala	ttg Leu	aaa Lys	gag Glu 510	His	ctg Leu	aca Thi	agt Ser	gat Asp 515) Ala	gcc Ala	act Thr	ggg	1948
aac Asr 520	ı His	agg Arg	g ctg Lei	g atg 1 Met	gag Glu 525	ı Glı	ctg Leu	ı aaçı ı Lys	gat As <u>r</u>	cag Glr 530	ı rer	g aaa 1 Lys	gac S Asp	ato Met	aaa Lys 535	1996
۷a]	l Lys	ту:	c Glu	1 Gly 540	Ala	a Ser	: Ala	ı Glı	1 Va:	l Gly	y Lys	s Leu	ı Arg	550		2044
ato Ile	c aaa e Lys	a caa	a aat n Asi 55!	n Glu	a atg 1 Met	g tta : Le	a gtt ı Val	gaa L Glu 560	ı GI	g tti u Pho	t aag e Lys	g aga	a gat g Asp 569	יונט כ	g ggc ı Gly	2092

aag ct Lys Le	eu M	Met (Glu	Glu	Asn	Lys	Arg 575	ьeu	GIII	гур	GIU	580	561	ricc	C/ 5	2140
gaa ct Glu Le 51	tg q eu (85	gag Glu	cga Arg	gag Glu	aag Lys	aga Arg 590	gga Gly	agg Arg	aag Lys	ctc Leu	act Thr 595	gag Glu	atg Met	gaa Glu	ggc Gly	2188
cag to Gln Lo	ta i	aag Lys	gac Asp	ttg Leu	tca Ser 605	gcc Ala	aag Lys	ctg Leu	gcc Ala	ctt Leu 610	tct Ser	att Ile	cca Pro	gca Ala	gag Glu 615	2236
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gca a Ala L	aa ys	aaa Lys	tta Leu 635	ata Ile	gat Asp	gtg Val	gaa Glu	aga Arg 640	gaa Glu	tat Tyr	gaa Glu	aga Arg	tca Ser 645	ctt Leu	aat Asn	2332
gaa a Glu T	ct hr	aga Arg 650	cca Pro	tta Leu	aag Lys	aga Arg	gaa Glu 655	ctt Leu	gag Glu	aat Asn	ttg Leu	aag Lys 660	gcc Ala	aaa Lys	ctg Leu	2380
gct c Ala G	ag 31n 565	cac His	gtc Val	aaa Lys	cca Pro	gag Glu 670	GIU	cat His	gag Glu	cag Gln	ctc Leu 675	aag Lys	agc Ser	aga Arg	tta Leu	2428
gag c Glu G 680	ag 31n	aag Lys	tca Ser	gga Gly	gaa Glu 685	ctt Leu	gly aaa	aag Lys	agg Arg	ato Ile 690	TILL	gag Glu	tta Leu	aca Thr	tcg Ser 695	2476
aaa a Lys <i>l</i>	aat Asn	cag Gln	acg Thr	tta Leu 700	Gln	aag Lys	gaa Glu	ato Ile	gaa Glu 705	гга	g gto Val	tgc Cys	ctg Leu	gat Asp 710	ADII	2524
aag (Lys 1	ctc Leu	ctt Leu	aca Thr 715	Gln	caa Gln	gta Val	aat Asr	aac Asn 720	Let	aca Thi	a act	gaa Glu	atg Met 725	пуъ	aat Asn	2572
gtc (Val 1	cct Pro	tta Leu 730	Lys	gta Val	agt Ser	gaa Glu	gaa Glu 735	ı Met	aaa Lys	a aag s Lys	g tca s Sei	cat His	ASL	gta Val	att Ile	2620
Val .	gat Asp 745	Asp	ttg Lev	g aat 1 Asr	aaa Lys	a aag 5 Lys 750	s Le	t tca ı Sei	a gat	gte val	g aca l Thi 759	HIE	aaa Lys	tat Tyi	aca Thr	2668
gaa Glu 760	aag Lys	aag Lys	tto Lei	g gaa ı Glu	a atg 1 Met 769	: Gl	g aaq ı Ly:	g tto s Lei	g cti ı Le	t ate u Me 77	E GI	a aat ı Ası	gco Ala	a Sei	t tta r Leu 775	2716
agt Ser	aaa Lys	aat Asr	gto Vai	c ago 1 Sei 780	r Ar	c cto	g gaa u Gl	a act	t gt r Va 78	1 bu	c at	a cci e Pro	cco Pro	gaq o Gli 79	g aga u Arg 0	2764
cac His	gaa Glu	aaa Lys	gaa 3 Gl: 79	u Me	g ate	g gc t Al	t ct a Le	g aa u Ly 80	s Se	c aa r As	t at n Il	c ac	t ga r Gl	u пе	t aag u Lys	2812

aag Lys	cag Gln	ctg Leu 810	tct Ser	gaa Glu	ctt Leu	aat Asn	aaa Lys 815	aaa Lys	tgt Cys	ggt Gly	gaa Glu	gac Asp 820	caa Gln	gag Glu	aaa Lys	2860	
ata Ile	tat Tyr 825	tca Ser	ctc Leu	atg Met	tct Ser	gaa Glu 830	aac Asn	aat Asn	gat Asp	ttg Leu	aaa Lys 835	aag Lys	acc Thr	atg Met	agt Ser	2908	ı
cat His 840	cag Gln	tat Tyr	gtg Val	ccc Pro	gtg Val 845	aaa Lys	acc Thr	cat His	gaa Glu	gag Glu 850	att Ile	aaa Lys	act Thr	gcc Ala	ttg Leu 855	2956	;
agt Ser	agc Ser	aca Thr	ttg Leu	gat Asp 860	aaa Lys	acc Thr	aat Asn	aga Arg	gaa Glu 865	tta Leu	gta Val	gat Asp	gtg Val	aag Lys 870	aag Lys	3004	L
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tat Tyi	gct Ala	ccg a Pro	o Ile	e ato	e Sei	ttq Lei	g gaa u Glu 97!	1 GI	g tgi u Cy:	gaq s Gl	g aga	a aa g Ly 98	5 F110	t aaa e Lys	a gcc s Ala	334	10
act Thi	c Gl	g aaa u Lys	a gaa s Glu	a cta u Lei	a aaa u Lya	s Gl	a caq u Gli 90	g ct	a tc u Se	c ca r Gl	n GI	g ac n Th 95	a cag r Gl	g aaq n Ly:	g tat s Tyr	338	38
aa As: 10	n T	cc aq hr S	gt g er G	aa g lu G	lu G	ag lu 005	gcc Ala	aag Lys	aag Lys	Cys	aag Lys 1010	Gln	gag Glu	aat Asn	gac Asp	aag Lys 1015	3436
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gt Va	t ca l Hi	c at s Il	e Gl	g a u A	at t sn S	ct t er T	at g yr G	lu T	ca hr .040	gaa Glu	aga Arg	gca Ala	tta Leu	agc Ser 1045		aaa Lys	3532
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Glu Lys Glu Val Gly Ile Ile Lys Ala Ser Leu	Arg Glu Lys Glu Glu
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ggc Gly 1320	Leu	tcc Ser	cag Gln	ctc Leu	acc Thr 1325	Tyr	gga Gly	agt Ser	999 Gly	agt Ser 1330	Pro	agc Ser	aag Lys	agg Arg	cag Gln 1335	4396
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